

**CLAIMS**

1. A method of heating in a vacuum atmosphere in the presence of a plasma, said method comprising the following steps :
  - 5 a) providing infrared radiation means in a vacuum chamber ;
  - b) providing a first electrical conductor to said infrared radiation means ;
  - c) providing a second electrical conductor from said infrared radiation means ;
  - 10 d) putting an electrical voltage over said infrared radiation means ;
  - e) preventing said first conductor and said second conductor from having an electrical voltage above +55 Volt.
2. A method according to claim 1,
  - 15 wherein said first conductor and said second conductor are prevented from having a positive electrical voltage.
3. A method according to claim 1,
  - 20 wherein said first conductor or said second conductor are kept electrically negative.
4. A method according to claim 1,
  - 25 wherein said first conductor and said second conductor are kept electrically negative.
5. A method according to claim 1
  - 30 wherein said method further comprises the step of providing a first feed-through through which said first conductor enters said vacuum chamber.
6. A method according to claim 1
  - wherein said method further comprises the step of providing a

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second feed-through through which said second conductor enters said vacuum chamber.

- 5           7. A method according to claim 1  
          wherein said vacuum chamber has walls, said method further comprising the step of electrically grounding said walls and said second conductor.
- 10          8. A method according to claim 1  
          wherein said method further comprising the step of electrically isolating said first and second conductors.
- 15          9. A method according to claim 8  
          wherein said method further comprising the step of electrically double isolating said first and second conductors.
- 20          10. A method according to claim 9  
          wherein said method further comprises the step of wrapping a metal shield said first conductor and said second conductor and connecting said shield to earth.
11. A method according to claim 1  
          wherein said electrical voltage is greater than 65 Volt.
- 25          12. A method of avoiding arcing in a vacuum atmosphere in the presence of a plasma, said method comprising the following steps :  
          a) providing a vacuum chamber ;  
          b) providing a plasma ;  
          c) providing an electrical power to or from a device in a vacuum  
30          chamber ;  
          d) providing a first electrical conductor to said device ;  
          e) providing a second electrical conductor from said device ;

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f) preventing said first and second electrical conductor from being loaded above +55 Volt so that electrons are not attracted in mass.

13. A method of increasing heating power when heating in a vacuum atmosphere in the presence of a plasma, said method comprising the following steps :

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a) providing infrared radiation means in a vacuum chamber ;

b) providing a first electrical conductor to said infrared radiation means ;

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c) providing a second electrical conductor from said infrared radiation means ;

d) putting an electrical voltage over said infrared radiation means ;

e) keeping said conductors negatively loaded ;

f) increasing the electrical voltage above 65 Volt.

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